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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,254	09/14/2005	Michael Kaus	DE 020179	9019
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EXAMINER				
FUJITA, KATRINA R				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/521,254

**Applicant(s)**

KAUS ET AL.

**Examiner**

KATRINA FUJITA

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office Action is responsive to Applicant's remarks received on January 03, 2008. Claims 1-9 remain pending.

### ***Information Disclosure Statement***

2. The Pardo et al. reference cited in the Search Report EPO has not been considered, and will not be listed on any patent resulting from this application because it was not provided on a separate list in compliance with 37 CFR 1.98(a)(1). In order to have the reference printed on such resulting patent, a separate listing, preferably on a PTO/SB/08A and 08B form, must be filed within the set period for reply to this Office action. Although Mazess reference (US 5,673,298) was also not listed in an IDS, it has been considered and included on the list of references cited.

### ***Drawings***

3. The previous drawing objections have been withdrawn in light of Applicant's amendment.

***Specification***

4. The previous specification objection has been withdrawn in light of Applicant's amendment.

***Claim Objections***

5. The following is a quotation of 37 CFR 1.75(a):

The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

6. Claims 8 and 9 are objected to under 37 CFR 1.75(a), as failing to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery.

Claim 8 recites "additional geometrical information" in line 9. It is unclear whether this is intended to be the same as or different from the "additional geometrical information" in line 4. The following will be assumed for examination purposes: -- the additional geometrical information --. The same applies to claim 9, line 8.

***Claim Rejections - 35 USC § 101***

7. The previous 101 rejection has been withdrawn in light of Applicant's amendment.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-3, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Chaney et al. (US 5,926,568).

Regarding **claim 1**, Chaney et al. discloses a method for determining geometrical properties of a structure of an object displayed in an image ("computer program instructions" at col. 22, line 51) comprising the steps of:

adapting a deformable surface model to the object ("deformable when applied to the object" at col. 4, line 13; figure 6, numeral 100);

applying additional geometrical information to the adapted deformable surface model of the object (figure 6, numeral 177); and

extracting the geometric properties of the structure of the object from the adapted deformable surface model to which additional geometrical information has been applied (figure 6, numeral 197).

Regarding **claim 2**, Chaney et al. discloses a method wherein the step of applying additional geometrical information to the adapted deformable surface model of the object further comprises the steps of:

identifying surface elements of the deformable surface model relating to a particular sub-part of the object ("a set of inter-figural links is defined which connect neighboring boundary sites on the subfigures and the parent figure" at col. 21, line 22); and

fitting a geometrical primitive to the surface elements relating to the particular sub-part of the object in the deformable surface model, the geometrical primitive having a form corresponding to a form of the particular sub-part ("each of the sites for the subfigures were then optimized over the individual figural parameters of translation, rotation, and scaling" at col. 21, line 34).

Regarding **claim 3**, Chaney et al. discloses a method wherein the geometrical properties of the object are extracted on the basis of the geometrical primitive ("subfigures" at col. 21, line 20).

Regarding **claim 4**, Chaney et al. discloses a method wherein the surface elements of the particular sub-part of the object are identified by means of labels assigned to the surface elements belonging to the particular sub-part ("links labeled MM are the medial-medial links" at col. 13, line 47).

Regarding **claim 5**, Chaney et al. discloses a method for determining an extended deformable surface model for adaptation to an object (figure 6, numeral 197), comprising the steps of:

determining a deformable surface model of the object, wherein the deformable surface model describes a surface of the object ("deformable when applied to the object" at col. 4, line 13; figure 6, numeral 100); and

integrating additional geometrical information into the deformable surface model (figure 6, numeral 177).

Regarding **claim 6**, Chaney et al. discloses a method wherein the step of integrating additional geometrical information into the deformable surface model further comprises the steps of:

selecting surface elements of a plurality of surface elements of the deformable surface model which belong to a sub-part of the object ("a set of inter-figural links is defined which connect neighboring boundary sites on the subfigures and the parent figure" at col. 21, line 22);

labeling the surface elements of the plurality of surface elements of the deformable surface model such that surface elements which belong to the same sub-

part have the same label ("links labeled MM are the medial-medial links" at col. 13, line 47).

Regarding **claim 7**, Chaney et al. discloses a method wherein the step of integrating additional geometrical information into the deformable surface model further comprises the steps of:

- selecting a geometrical primitive in accordance with a form of the sub-part ("subfigures" at col. 21, line 20); and

- determining a rule which maps the geometrical primitive onto the surface elements of the plurality of surface elements of the deformable surface model ("each of the sites for the subfigures were then optimized over the individual figural parameters of translation, rotation, and scaling" at col. 21, line 34).

Regarding **claim 8**, Chaney et al. discloses an image processing device (figure 10, numeral 55), comprising:

- a memory (memory of figure 10, numeral 55) for storing a deformable model (figure 6, numeral 175) and an image depicting an object (figure 6, numeral 110); and
- an image processor ("processor" at col. 22, line 56) for determining geometrical properties of the object, which processor performs the following operation:

- adapting a deformable surface model to the object ("deformable when applied to the object" at col. 4, line 13; figure 6, numeral 100);

- applying additional geometrical information to the adapted deformable surface model of the object (figure 6, numeral 177); and



extracting the geometric properties of the structure of the object from the adapted deformable surface model to which additional geometrical information has been applied (figure 6, numeral 197).

Regarding **claim 9**, Chaney et al. discloses a computer-readable medium having processor-executable instructions thereon for the image processing device above which, when executed by a processor, direct the processor to determine ("computer program instructions. These program instructions may be provided to a processor to produce a machine, such that the instructions which execute on the processor create means for implementing the functions" at col. 22, line 51), comprising the following steps:

adapting a deformable surface model to the object ("deformable when applied to the object" at col. 4, line 13; figure 6, numeral 100);

applying additional geometrical information to the adapted deformable surface model of the object (figure 6, numeral 177); and

extracting the geometric properties of the structure of the object from the adapted deformable surface model to which additional geometrical information has been applied (figure 6, numeral 197).

### ***Response to Arguments***

Summary of Remarks (@ response page labeled 6): Chaney does not disclose applying additional geometrical information to the adapted deformable surface model of the object.

Examiner's Response: The Examiner pointed to figure 6, numeral 100 as support for the adapted deformable surface model of the object. Numeral 100 contains functionality that allows a user to edit the template to become a desired shape, which is an adapted deformable surface model of the object. This model is further utilized by applying additional training images to the model during comparison.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2624

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATRINA FUJITA whose telephone number is (571)270-1574. The examiner can normally be reached on M-Th 8-5:30pm, F 8-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katrina Fujita/  
Examiner, Art Unit 2624

/Vikkram Bali/  
Supervisory Patent Examiner, Art Unit 2624